

**IN THE UNITED STATES DISTRICT COURT
FOR THE WESTERN DISTRICT OF TEXAS
WACO DIVISION**

Neo Wireless LLC,

Plaintiff,

v.

LG Electronics Inc., and LG Electronics
U.S.A., Inc.,

Defendants.

CIVIL ACTION NO. 6:21-cv-0025

JURY TRIAL DEMANDED

PLAINTIFF’S ORIGINAL COMPLAINT

Plaintiff Neo Wireless LLC (“Plaintiff” or “Neo Wireless”) files this Original Complaint against Defendants LG Electronics Inc. (“LGE”), and LG Electronics U.S.A., Inc. (“LG USA”) (collectively “LG”) for patent infringement under 35 U.S.C. § 271. Plaintiff alleges, based on its own personal knowledge with respect to its own actions and based upon information and belief with respect to all others’ actions, as follows:

THE PARTIES

1. Plaintiff Neo Wireless LLC is a Delaware corporation with its principal place of business located in Wayne, Pennsylvania.
2. On information and belief, Defendant LGE is a corporation organized and existing under the laws of the Republic of Korea with a principal place of business at LG Twin Towers, 128 Yeouidaero, Yeongdungpo-gu, Seoul, South Korea. LGE is the entity that manufactures the LG-branded products sold in the United States, including the Accused Instrumentalities in this case. In addition to making the infringing products, LGE is responsible for research and development, product design, and sourcing of components.

3. On information and belief, Defendant LG USA is a Delaware corporation registered to do business in Texas and is a direct subsidiary of LGE. LG USA has numerous regular and established places of business in Texas including at least at 9420 Research Blvd, Austin, Texas 78759; 2155 Eagle Parkway, Fort Worth, Texas 76177; and 14901 Beach St, Fort Worth, TX 76177.

4. On information and belief, LG maintains one or more physical fixed places of business in Texas, including offices at 9420 Research Blvd, Austin, Texas 78759, and a representative office at 9600 Great Hills Trail, Suite 150W, Austin, TX 78759.¹

JURISDICTION AND VENUE

5. This action includes a claim of patent infringement arising under the patent laws of the United States, 35 U.S.C. §§ 1 *et seq.* This Court has jurisdiction over this action pursuant to 28 U.S.C. §§ 1331 and 1338(a).

6. This Court has personal jurisdiction over each of the LG Defendants. As indicated above, LG conducts business and has committed acts of patent infringement and has induced and contributed to acts of patent infringement by others in this District, the State of Texas, and elsewhere in the United States.

7. Each LG Defendant has committed acts of infringement in this judicial District and maintains regular and established places of business in this District, directly or through its subsidiaries, as set forth above. LG has continuous and systematic business contacts with the State of Texas.

8. LG USA, directly or through subsidiaries or intermediaries (including

¹ <http://m.lgdisplay.com/m/eng/company/locationGlobal?placeLocCode=OVE02>.

distributors, retailers, contract manufacturers, and others), conducts its business extensively throughout Texas, including by distributing, offering for sale, selling, and advertising (including by the provision of interactive web pages) its products and services in the State of Texas and the Western District of Texas.

9. LG USA employs persons with relevant knowledge of the accused technology in Texas. For example, LG USA recently published a job posting seeking a Production Planning Analyst that is bilingual in Korean and English for Fort Worth, Texas.²

10. LG USA sells its phones to carriers and retailers in Texas placing and continuing to place infringing smartphones and software into the stream of commerce via an established distribution channel with the knowledge and/or intent that those products were sold and continue to be sold in the United States and Texas, including in this District. For example, LG USA has a distribution center in Fort Worth that serves as its single largest distribution point in the United States.³

11. LGE, directly or through subsidiaries or intermediaries (including LG USA, distributors, retailers, contract manufacturers, and others), conducts its business

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https://www.google.com/search?q=Production+Planning+Analyst+LG+electornics+fort+worth+texas&rlz=1C1GCEA_enUS888US888&oq=Production+Planning+Analyst+LG+electornics+fort+worth+texas&aqs=chrome..69i57j33.5316j0j4&sourceid=chrome&ie=UTF-8&ibp=htl;jobs&sa=X&ved=2ahUKEwjgopTlqf3rAhUH7awKHYo_DPQQp4wCMAB6BAGNEAE#fpstate=tldetail&htivrt=jobs&htiq=Production+Planning+Analyst+LG+electornics+fort+worth+texas&htidocid=HduTHXt9Hb8hesJAAAAAAAA%3D%3D&sxsrf=ALeKk00F0qUQLSvhBxXH7r4F_FvtaueFew:1600797068832.

³ <https://www.bizjournals.com/dallas/news/2013/10/23/how-lg-electronics-will-use-12m-sf.html>

extensively throughout Texas, including by shipping, manufacturing, distributing, offering for sale, selling, and advertising (including by the provision of interactive web pages) its products and services in the State of Texas and the Western District of Texas.

12. LGE purposefully and voluntarily places its infringing products into the stream of commerce with the expectation and the knowledge that those products will be purchased and used by consumers in this State and this District.

13. For example, while LGE is a South Korean entity, it operates (in whole or in part) a United-States focused website (www.lg.com/us), including one that advertises the Accused Instrumentalities. LG's US-focused website contains copyright notices in the name of "LG Electronics," and legal terms in the name of LGE specifically. *See* <https://www.lg.com/us/legal>. This demonstrates that LGE knows and intends that its products will reach customers throughout the United States, including in this District, or that LGE, at least reasonably could have foreseen that a termination point of its distribution channel is Texas. This is further demonstrated by the presence, noted *supra* note 3, of LG's single largest US distribution center in this State.

14. Further, on information and belief, LGE controls the activities (catalogued above) within the United States and this District of LG USA, its direct subsidiary. On information and belief, LGE sells its smartphones through a distribution channel it established with LG USA, which includes third-party distributors such as Verizon, Sprint, AT&T, and T-Mobile, with knowledge that the Accused Products will be sold nationwide, including in Texas.

15. Further, assertion of personal jurisdiction over either LG Defendant would not be unfair or unreasonable, particularly given LG's concerted efforts to serve the United States market, including Texas.

16. Venue is proper in this judicial district per 28 U.S.C. §§ 1391 and 1400(b).

17. As described above, each LG Defendant has committed acts of infringement in this judicial District and maintains regular and established places of business in this District, directly or through its subsidiaries, as set forth above.

18. Additionally, LGE is a foreign entity and thus, venue is proper under 28 U.S.C. § 1391(b) and (c)(3). *See In re HTC Corp.*, 889 F.3d 1349, 1354, 1356 (Fed. Cir. 2018).

ASSERTED PATENTS

19. On June 18, 2013, the United States Patent and Trademark Office duly and legally issued U.S. Patent No. 8,467,366 (“the ’366 patent”), entitled “Methods and Apparatus for Random Access in Multi-Carrier Communication Systems.” A copy of the ’366 patent is attached as Exhibit A.

20. The ’366 patent issued from U.S. Patent Application 13/205,579, which was assigned from the inventors to Waltical Solutions, Inc. on April 8, 2005. The application was later assigned from Waltical Solutions, Inc. to Neocific, Inc. on December 14, 2005. The now-issued ’366 patent was assigned from Neocific, Inc. to CFIP NCF LLC on November 22, 2019 before it was assigned to Neo Wireless LLC on January 23, 2020.

21. The ’366 patent is valid and enforceable.

22. On June 7, 2016, the United States Patent and Trademark Office duly and legally issued U.S. Patent No. 9,363,066 (“the ’066 patent”), entitled “Method and Apparatus for Flexible Use of Frequency Bands.” A copy of the ’066 patent is attached as Exhibit B.

23. The ’066 patent issued from U.S. Patent Application 14/041,495, which

was assigned from the inventors to Neocific, Inc. on February 2, 2012. The now-issued '066 patent was later assigned from Neocific, Inc. to CFIP NCF LLC on November 22, 2019 before it was assigned to Neo Wireless LLC on January 23, 2020.

24. The '066 patent is valid and enforceable.

25. On April 17, 2018, the United States Patent and Trademark Office duly and legally issued U.S. Patent No. 9,948,908 (“the '908 patent”), entitled “Channel Probing Signal for a Broadband Communication System.” A copy of the '908 patent is attached as Exhibit C.

26. The '908 patent issued from U.S. Patent Application 14/321,615, which was filed by Neo Wireless LLC on behalf of the inventors.

27. The '908 patent is valid and enforceable.

28. On September 11, 2018, the United States Patent and Trademark Office duly and legally issued U.S. Patent No. 10,075,941 (“the '941 patent”), entitled “Methods and Apparatus for Multi-Carrier Communications With Adaptive Transmission and Feedback.” A copy of the '941 patent is attached as Exhibit D.

29. The '941 patent issued from U.S. Patent Application 15/082,878, which was assigned from the inventors to Waltical Solutions, Inc. on April 8, 2005. The application was later assigned from Waltical Solutions, Inc. to Neocific, Inc. on December 14, 2005. The now-issued '941 patent was assigned from Neocific, Inc. to CFIP NCF LLC on November 22, 2019 before it was assigned to Neo Wireless LLC on January 23, 2020.

30. The '941 patent is valid and enforceable.

31. The '450 patent issued from U.S. Patent Application 15/676,421, which was assigned from the inventors to Neocific, Inc. on October 2, 2007. The now-issued '450 patent was later assigned from Neocific, Inc. to CFIP NCF LLC on

November 22, 2019 before it was assigned to Neo Wireless LLC on January 23, 2020.

32. The '450 patent is valid and enforceable.

33. On October 15, 2019, the United States Patent and Trademark Office duly and legally issued U.S. Patent No. 10,447,450 (“the '450 patent”), entitled “Method and System for Multi-Carrier Packet Communication with Reduced Overhead.” A copy of the '450 patent is attached as Exhibit E.

34. Neo Wireless owns all rights, title, and interest in and to each of the '366, '066, '908, '941, and '450 patents (the “patents-in-suit”) and possesses all rights of recovery.

FACTUAL ALLEGATIONS

35. Inventor Xiaodong (Alex) Li, Ph.D. founded Neocific Inc. in the early 2000s to design, develop, and implement a new wireless communication system. He and his co-inventors had extensive experience with wireless communications systems, including the development of the Wi-Max standards, and a deep understanding of the flaws in existing systems at the time. The inventors saw an opportunity to create a new wireless communication system meant to address those flaws while incorporating cutting-edge Orthogonal Frequency-Division Multiple Access (OFDMA) based technologies and, starting in the 2004 to 2005 timeframe, they filed patents on the work.

36. Dr. Li served as the President and Founder of Neocific. Dr. Li obtained his Ph.D. in electrical engineering from the University of Washington, his M.S. from Shanghai Jiao Tong University, and his B.S. from Tsinghua University. Dr. Li has authored more than 30 journal and conference papers in wireless communications, video coding, and networking. He has been granted more than 100 U.S. and foreign patents.

37. Dr. Titus Lo, Ph.D. is a founding employee of Neocific. Dr. Lo obtained his Ph.D. in electrical engineering from McMaster University and his B.S. from the

University of British Columbia. Dr. Lo has authored more than 30 technical papers in international peer-reviewed journals and presented more than 50 times at industry events. He has been granted more than 100 U.S. and foreign patents.

38. Neo Wireless owns all substantial right, title, and interest in the patents-in-suit, and holds the right to sue and recover damages for infringement thereof.

39. David Loo is the CEO of Plaintiff Neo Wireless. Mr. Loo works and resides in Wayne, Pennsylvania. Mr. Loo has over a decade of experience as a licensing executive and patent attorney with a well-established track record of assisting companies, inventors and patent holders to ensure they are fairly compensated for their inventions.

40. The wireless communication industry has been developing rapidly since Bell Labs developed the First Generation of modern commercial cellular technology in 1984. Multiple wireless communication technologies designated by generations emerged and brought new capacities to people all over the world. In 2008, 3GPP created and finalized the LTE standards as an upgrade to 3G. The cellular industry recognized its major benefits, and virtually all cellular device manufacturers, including LG, have embraced LTE as the next generation of commercial cellular technology and developed phones and other cellular devices to utilize the 4G LTE technology.

41. Defendant LGE is a South Korean multinational electronics company whose products include, among others, phones and other cellular devices. LG has been one of the most popular phone brands in the United States, and it is known for its flagship G series and V series of smartphones.

42. LG has established itself as a major smartphone industry player by aggressively pushing forward with 4G LTE and 5G technology. LG targets the full spectrum of LTE customers with its G series for luxury consumers, the F series with the mission of “4G LTE for everyone,” the lower-end L series, and the Vu tablets. In 2019, LG announced that all of its V series phones will use 5G networks going forward, and all

G series phones will continue to use 4G LTE technology.

43. In order to use LTE or 4G and 5G networks, the LG smartphones are manufactured to comply with wireless standards, such as the 3GPP standards, that ensure compatibility of wireless devices and wireless networks. Other cellular-capable devices of LG, such as tablets and smart watches, are designed to ensure compliance with the 3GPP standards as well.

44. As described above, the asserted patents read on portions of the LTE or 4G and 5G standards, which LG implements in its products, such as its G series, V series, F series, and L series phones and other cellular-capable devices (“LG’s Accused Instrumentalities”), which it makes, uses, sells, offers to sell and/or imports in the United States. Accordingly, LG directly and indirectly infringes each of the patents-in-suit.

45. LG does not have any rights to the patents-in-suit.

46. In the interest of providing detailed averments of infringement, Neo Wireless has identified below at least one claim per patent to demonstrate infringement. However, the selection of claims should not be considered limiting, and additional claims of the patents-in-suit (including method, system, and apparatus claims) that are infringed by LG will be disclosed in compliance with the Court’s rules related to infringement contentions.

COUNT ONE: INFRINGEMENT OF THE ’366 PATENT

47. Neo Wireless incorporates by reference the preceding paragraphs as if fully set forth herein.

48. As described above, Defendant LG has infringed and continues to infringe the patents-in-suit by implementing certain cellular standards, including particular 3GPP standards, in its products.

49. LG directly infringes the ’366 patent because it has made, used, sold,

offered to sell and/or imported its respective Accused Instrumentalities in the United States. For example, each of LG's Accused Instrumentalities implements the portions of the 3GPP LTE standard specification that read on at least claim 1 the '366 patent. *See* Exhibit F.

50. LG's Accused Instrumentalities meet at least one claim of the '366 patent.

51. LG makes, uses, offers to sell, sells, and imports LG's Accused Instrumentalities within the United States or into the United States without authority from Neo Wireless.

52. LG therefore infringes the '366 patent under 35 U.S.C. § 271(a).

53. LG indirectly infringes the '366 patent by inducing infringement by others, such as end-user customers, by, for example, encouraging its users to take advantage of LTE features within the United States and by implementing the standardized features in its cellular-capable devices.

54. LG took the above actions intending to cause infringing acts by others.

55. On information and belief, LG was aware of the '366 patent prior to the filing of this lawsuit.

56. LG patents KR100,939,722 and MY167057A cite to related patents or patent applications the '366 patent family.

57. LG received actual notice of its infringement of the '366 patent at least as early as the date of service of Complaint. Therefore, LG was or is now aware of the '366 patent or has willfully blinded itself as to the existence of the '366 patent and made, used, sold, offered to sell, imported and/or encouraged the making, using, selling, offering to sell, or importing of the Accused Products despite knowing of an objectively high likelihood that its actions constituted infringement of the '366 patent at all times relevant to this suit. Alternatively, LG subjectively believed there was a high probability that

others would infringe the '366 patent but took deliberate steps to avoid confirming that it was actively inducing infringement by others. LG therefore infringes the patents-in-suit under 35 U.S.C. § 271(b).

58. LG indirectly infringes the '366 patent by contributing to infringement by others, such as end-user customers by offering to sell and selling within the United States components (that is, LG's Accused Instrumentalities) that constitute a material part of the inventions claimed in the '366 patent, and that are used to practice one or more processes/methods covered by the claims of the '366 patent. LG's end-user customers directly infringe the '366 patent by, for example, using the cellular functionality of LG's Accused Instrumentalities, including establishing communication with the cellular wireless network and contending for access to resources on the network.

59. In offering to sell and selling the components specified above, LG has known these components to be especially made or especially adapted for use in an infringement of the '366 patent and that these components are not a staple article or commodity of commerce suitable for substantial non-infringing use. Alternatively, LG subjectively believed there was a high probability that these components to be especially made or especially adapted for use in an infringement of the '366 patent and that these components are not a staple article or commodity of commerce suitable for substantial non-infringing use, but took deliberate steps to avoid confirming the same. LG therefore infringes the '366 patent under 35 U.S.C. § 271(c).

60. To the extent that LG releases any new version of LG's Accused Instrumentalities, such instrumentalities will meet the claims of the '366 patent and infringe under 35 U.S.C. § 271(a)-(c) in ways analogous to LG's current infringement described above.

61. Neo Wireless has been damaged and continues to be damaged by each of LG's infringement of the 366 patent.

COUNT TWO: INFRINGEMENT OF THE '066 PATENT

62. Neo Wireless incorporates by reference the preceding paragraphs as if fully set forth herein.

63. As described above, Defendant LG has infringed and continues to infringe the patents-in-suit by implementing certain cellular standards, including particular 3GPP standards, in its products.

64. LG directly infringes the '066 patent because it has made, used, sold, offered to sell and/or imported its respective Accused Instrumentalities in the United States. For example, each of LG's Accused Instrumentalities implements the portions of the 3GPP LTE standard specification that read on at least claim 6 the '066 patent. *See* Exhibit G.

65. LG's Accused Instrumentalities meet at least one claim of the '066 patent.

66. LG makes, uses, offers to sell, sells, and imports LG's Accused Instrumentalities within the United States or into the United States without authority from Neo Wireless.

67. LG therefore infringes the '066 patent under 35 U.S.C. § 271(a).

68. LG indirectly infringes the '066 patent by inducing infringement by others, such as end-user customers, by, for example, encouraging its users to take advantage of LTE features within the United States and by implementing the standardized features in its cellular-capable devices.

69. LG took the above actions intending to cause infringing acts by others.

70. On information and belief, LG was aware of the '066 patent prior to the filing of this lawsuit.

71. The file history of LG patents WO2015105308A1 and U.S. Patent No.

10,587,336 cite to the '066 patent or a patent or patent application in the '066 patent family.

72. LG received actual notice of its infringement of the '066 patent at least as early as the date of service of Complaint. Therefore, LG was or is now aware of the '066 patent or has willfully blinded itself as to the existence of the '066 patent and made, used, sold, offered to sell, imported and/or encouraged the making, using, selling, offering to sell, or importing of the Accused Products despite knowing of an objectively high likelihood that its actions constituted infringement of the '066 patent at all times relevant to this suit. Alternatively, LG subjectively believed there was a high probability that others would infringe the '066 patent but took deliberate steps to avoid confirming that it was actively inducing infringement by others. LG therefore infringes the patents-in-suit under 35 U.S.C. § 271(b).

73. LG indirectly infringes the '066 patent by contributing to infringement by others, such as end-user customers by offering to sell and selling within the United States components (that is, LG's Accused Instrumentalities) that constitute a material part of the inventions claimed in the '066 patent, and that are used to practice one or more processes/methods covered by the claims of the '066 patent. LG's end-user customers directly infringe the '066 patent by, for example, using the cellular functionality of LG's Accused Instrumentalities, including establishing communication with the cellular wireless network and contending for access to resources on the network.

74. In offering to sell and selling the components specified above, LG has known these components to be especially made or especially adapted for use in an infringement of the '066 patent and that these components are not a staple article or commodity of commerce suitable for substantial non-infringing use. Alternatively, LG subjectively believed there was a high probability that these components to be especially made or especially adapted for use in an infringement of the '066 patent and that these

components are not a staple article or commodity of commerce suitable for substantial non-infringing use, but took deliberate steps to avoid confirming the same. LG therefore infringes the '066 patent under 35 U.S.C. § 271(c).

75. To the extent that LG releases any new version of LG's Accused Instrumentalities, such instrumentalities will meet the claims of the '066 patent and infringe under 35 U.S.C. § 271(a)-(c) in ways analogous to LG's current infringement described above.

76. Neo Wireless has been damaged and continues to be damaged by each of LG's infringement of the 066 patent.

COUNT THREE: INFRINGEMENT OF THE '908 PATENT

77. Neo Wireless incorporates by reference the preceding paragraphs as if fully set forth herein.

78. As described above, Defendant LG has infringed and continues to infringe the patents-in-suit by implementing certain cellular standards, including particular 3GPP standards.

79. LG directly infringes the '908 patent because it has made, used, sold, offered to sell and/or imported its respective Accused Instrumentalities in the United States. For example, each of LG's Accused Instrumentalities implements the portions of the 3GPP LTE standard specification that read on at least claim 11 the '908 patent. *See* Exhibit H.

80. LG's Accused Instrumentalities meet at least one claim of the '908 patent.

81. LG makes, uses, offers to sell, sells, and imports LG's Accused Instrumentalities within the United States or into the United States without authority from Neo Wireless.

82. LG therefore infringes the '908 patent under 35 U.S.C. § 271(a).

83. LG indirectly infringes the '908 patent by inducing infringement by others, such as end-user customers, by, for example, encouraging its users to take advantage of LTE features within the United States and by implementing the standardized features in its cellular-capable devices.

84. LG took the above actions intending to cause infringing acts by others.

85. On information and belief, LG was aware of the '908 patent prior to the filing of this lawsuit.

86. LG patents KR100904533B1 and U.S. Patent No. 9,059,813 cite to related patents or patent applications in the '908 patent family.

87. LG received actual notice of its infringement of the '908 patent at least as early as the date of service of Complaint. Therefore, LG was or is now aware of the '908 patent or has willfully blinded itself as to the existence of the '908 patent and made, used, sold, offered to sell, imported and/or encouraged the making, using, selling, offering to sell, or importing of the Accused Products despite knowing of an objectively high likelihood that its actions constituted infringement of the '908 patent at all times relevant to this suit. Alternatively, LG subjectively believed there was a high probability that others would infringe the '908 patent but took deliberate steps to avoid confirming that it was actively inducing infringement by others. LG therefore infringes the '908 patent under 35 U.S.C. § 271(b).

88. LG indirectly infringes the '908 patent by contributing to infringement by others, such as end-user customers by offering to sell and selling within the United States components (that is, LG's Accused Instrumentalities) that constitute a material part of the inventions claimed in the '908 patent, and that are used to practice one or more processes/methods covered by the claims of the '908 patent. LG's end-user customers directly infringe the '908 patent by, for example, using the cellular functionality of LG's Accused Instrumentalities, including establishing communication with the cellular wireless network and contending for access to resources on the network.

89. In offering to sell and selling the components specified above, LG has known these components to be especially made or especially adapted for use in an infringement of the '908 patent and that these components are not a staple article or commodity of commerce suitable for substantial non-infringing use. Alternatively, LG subjectively believed there was a high probability that these components to be especially made or especially adapted for use in an infringement of the '908 patent and that these components are not a staple article or commodity of commerce suitable for substantial non-infringing use, but took deliberate steps to avoid confirming the same. LG therefore infringes the '908 patent under 35 U.S.C. § 271(c).

90. To the extent that LG releases any new version of LG's Accused Instrumentalities, such instrumentalities will meet the claims of the '908 patent and infringe under 35 U.S.C. § 271(a)-(c) in ways analogous to LG's current infringement described above.

91. Neo Wireless has been damaged and continues to be damaged by each of LG's infringement of the 908 patent.

COUNT FOUR: INFRINGEMENT OF THE '941 PATENT

92. Neo Wireless incorporates by reference the preceding paragraphs as if fully set forth herein.

93. As described above, Defendant LG has infringed and continues to infringe the patents-in-suit by implementing certain cellular standards, including particular 3GPP standards, in its products.

94. LG directly infringes the '941 patent because it has made, used, sold, offered to sell and/or imported its respective Accused Instrumentalities in the United States. For example, each of LG's Accused Instrumentalities implements the portions of the 3GPP LTE standard specification that read on at least claim 13 the '941 patent. *See*

Exhibit I.

95. LG's Accused Instrumentalities meet at least one claim of the '941 patent.

96. LG makes, uses, offers to sell, sells, and imports LG's Accused Instrumentalities within the United States or into the United States without authority from Neo Wireless.

97. LG therefore infringes the '941 patent under 35 U.S.C. § 271(a).

98. LG indirectly infringes the '941 patent by inducing infringement by others, such as end-user customers, by, for example, encouraging its users to take advantage of LTE features within the United States and by implementing the standardized features in its cellular-capable devices.

99. LG took the above actions intending to cause infringing acts by others.

100. On information and belief, LG was aware of the '941 patent prior to the filing of this lawsuit.

101. LG patents U.S. Patent No. 8,027,243 and U.S. Patent No. 8,428,018 cite to related patents or patent applications in the '941 patent family, and the file histories of LG patents KR101325809B1, KR101407136B1, KR101230780B1, and KR101582685B1 cite to the '941 patent or related patents or patent applications in the '941 patent family.

102. LG received actual notice of its infringement of the '941 patent at least as early as the date of service of Complaint. Therefore, LG was or is now aware of the '941 patent or has willfully blinded itself as to the existence of the '941 patent and made, used, sold, offered to sell, imported and/or encouraged the making, using, selling, offering to sell, or importing of the Accused Products despite knowing of an objectively high likelihood that its actions constituted infringement of the '941 patent at all times relevant to this suit. Alternatively, LG subjectively believed there was a high probability that others would infringe the '941 patent but took deliberate steps to avoid confirming that it

was actively inducing infringement by others. LG therefore infringes the '941 patent under 35 U.S.C. § 271(b).

103. LG indirectly infringes the '941 patent by contributing to infringement by others, such as end-user customers by offering to sell and selling within the United States components (that is, LG's Accused Instrumentalities) that constitute a material part of the inventions claimed in the '941 patent, and that are used to practice one or more processes/methods covered by the claims of the '941 patent. LG's end-user customers directly infringe the '941 patent by, for example, using the cellular functionality of LG's Accused Instrumentalities, including establishing communication with the cellular wireless network and contending for access to resources on the network.

104. In offering to sell and selling the components specified above, LG has known these components to be especially made or especially adapted for use in an infringement of the '941 patent and that these components are not a staple article or commodity of commerce suitable for substantial non-infringing use. Alternatively, LG subjectively believed there was a high probability that these components to be especially made or especially adapted for use in an infringement of the '941 patent and that these components are not a staple article or commodity of commerce suitable for substantial non-infringing use, but took deliberate steps to avoid confirming the same. LG therefore infringes the '941 patent under 35 U.S.C. § 271(c).

105. To the extent that LG releases any new version of LG's Accused Instrumentalities, such instrumentalities will meet the claims of the '941 patent and infringe under 35 U.S.C. § 271(a)-(c) in ways analogous to LG's current infringement described above.

106. Neo Wireless has been damaged and continues to be damaged by each of LG's infringement of the 941 patent.

COUNT FIVE: INFRINGEMENT OF THE '450 PATENT

107. Neo Wireless incorporates by reference the preceding paragraphs as if fully set forth herein.

108. As described above, Defendant LG has infringed and continues to infringe the patents-in-suit by implementing certain cellular standards, including particular 3GPP standards, in its products.

109. LG directly infringes the '450 patent because it has made, used, sold, offered to sell and/or imported its respective Accused Instrumentalities in the United States. For example, each of LG's Accused Instrumentalities implements the portions of the 3GPP LTE standard specification that read on at least claim 7 the '450 patent. *See* Exhibit J.

110. LG's Accused Instrumentalities meet at least one claim of the '450 patent.

111. LG makes, uses, offers to sell, sells, and imports LG's Accused Instrumentalities within the United States or into the United States without authority from Neo Wireless.

112. LG therefore infringes the '450 patent under 35 U.S.C. § 271(a).

113. LG indirectly infringes the '450 patent by inducing infringement by others, such as end-user customers, by, for example, encouraging its users to take advantage of LTE features within the United States and by implementing the standardized features in its cellular-capable devices.

114. LG took the above actions intending to cause infringing acts by others.

115. LG received actual notice of its infringement of the '450 patent at least as early as the date of service of Complaint. Therefore, LG was or is now aware of the '450 patent or has willfully blinded itself as to the existence of the '450 Patent and made, used, sold, offered to sell, imported and/or encouraged the making, using, selling, offering to sell, or importing of the Accused Products despite knowing of an objectively high likelihood that its actions constituted infringement of the '450 patent at all times relevant

to this suit. Alternatively, LG subjectively believed there was a high probability that others would infringe the '450 patent but took deliberate steps to avoid confirming that it was actively inducing infringement by others. LG therefore infringes the '450 patent under 35 U.S.C. § 271(b).

116. LG indirectly infringes the '450 patent by contributing to infringement by others, such as end-user customers by offering to sell and selling within the United States components (that is, LG's Accused Instrumentalities) that constitute a material part of the inventions claimed in the '450 patent, and that are used to practice one or more processes/methods covered by the claims of the '450 patent. LG's end-user customers directly infringe the '450 patent by, for example, using the cellular functionality of LG's Accused Instrumentalities, including establishing communication with the cellular wireless network and contending for access to resources on the network.

117. In offering to sell and selling the components specified above, LG has known these components to be especially made or especially adapted for use in an infringement of the '450 patent and that these components are not a staple article or commodity of commerce suitable for substantial non-infringing use. Alternatively, LG subjectively believed there was a high probability that these components to be especially made or especially adapted for use in an infringement of the '450 patent and that these components are not a staple article or commodity of commerce suitable for substantial non-infringing use, but took deliberate steps to avoid confirming the same. LG therefore infringes the '450 patent under 35 U.S.C. § 271(c).

118. To the extent that LG releases any new version of LG's Accused Instrumentalities, such instrumentalities will meet the claims of the '450 patent and infringe under 35 U.S.C. § 271(a)-(c) in ways analogous to LG's current infringement described above.

119. Neo Wireless has been damaged and continues to be damaged by each of LG's infringement of the '450 patent.

JURY DEMAND

Plaintiff hereby demands a trial by jury on all issues so triable.

PRAYER FOR RELIEF

WHEREFORE Plaintiff Neo Wireless LLC asks this Court for an order granting the following relief:

- a. a judgment in favor of Plaintiff that LG has infringed, either literally and/or under the doctrine of equivalents, the patents-in-suit;
- b. a judgment and order requiring LG to pay Plaintiff its damages, costs, expenses, and any enhanced damages to which Plaintiff is entitled for LG's infringement;
- c. a judgment and order requiring LG to provide an accounting and to pay supplemental damages to Plaintiff, including without limitation, pre-judgment and post-judgment interest;
- d. a judgment and order requiring LG to pay ongoing royalties;
- e. a judgment and order finding that this is an exceptional case within the meaning of 35 U.S.C. § 285 and awarding Plaintiff its reasonable attorney fees against LG; and
- f. any and all other relief as the Court may deem appropriate and just under the circumstances.

DATED: January 13, 2021

Respectfully submitted,

/s/ Jason D. Cassady

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